

...NWS Damage Surveys for April 29th Lower/Mid Valley Thunderstorm Wind Event Finds 70 to 85 mph Estimated Peak Gusts...

.Update...This is an update of the preliminary survey issued on Saturday evening April 29th.

.Overview...A rapidly developing and accelerating squall line raced through the populated Lower Rio Grande Valley region of Texas, initially producing large hail up to golfball size in southern Zapata and southwestern Starr County before evolving into the squall line that produced wind damage from southern Starr County through southern portions of Hidalgo and Cameron County. The initial hail reports occurred from 1005 PM through 1130 PM April 28th, with the swath of wind damage occurring between 1130 PM April 28th and 130 AM April 29th.

Significant wind damage began near La Joya and Sullivan City (Hidalgo County) near the Starr County line just after midnight April 29th, continuing through Peñitas, then the population centers of Mission, McAllen and Pharr, before moving toward the Rio Grande and impacting locations south of Donna, Weslaco, and Mercedes. The core of the significant wind tracked along the Rio Grande in southwestern Cameron County before weakening along and south of the river by 130 AM.

Lesser, but still notable, damage occurred along Interstate Highway 2 between Weslaco and Harlingen, as well as in Brownsville (Cameron County).

Two survey teams investigated the damage from Mission in Hidalgo County through southwest Cameron County along the Rio Grande. Those results are described below. Due to time constraints, the survey teams were unable to look at damage in extreme southwest Hidalgo County between Sullivan City and Penitas.

Damage from the macroburst was extensive. Hundreds of buildings, many of substandard construction, had damage to roofs, siding, metal doors, and soffits. Several poorly anchored or poorly constructed buildings collapsed. Dozens, if not hundreds, of power poles and power lines were damaged or blown down, and preliminary estimates indicated somewhere between 150 and 200 thousand regional customers lost power during the height of the storm. Thousands of healthy hard and softwood tree limbs fell, and hundreds of trees were snapped or uprooted.

Damage to buildings, infrastructure, and trees/crops is likely to be in the tens of millions of dollars, if not more. Those details will be available at a later date. Despite the vast swaths of damage, there were no known human casualties as of this writing (May 1, 2023).

Thunderstorm Wind 1: McAllen to Progresso, Hidalgo County Texas...

Peak Wind /E/: 75 to 85 mph  
Path Length /statute/: 25.8 miles  
Path Width /maximum/: 6 miles

Fatalities: 0  
Injuries: 0

Start Date: Apr 29 2023  
Start Time: 1223 AM CDT  
Start Location: 1 NW Mission / Hidalgo TX  
Start Lat/Lon: 26.2330 / -98.3990

End Date: Apr\_29\_2023  
End Time: 1253\_AM CDT  
End Location: Progreso / Hidalgo TX  
End Lat/Lon: 26.0950 / -97.9530

NWS Brownsville/Rio Grande Valley survey team #1's damage track began along the Interstate Highway 2 (IH-2) frontage road just east of Bryan Road in mission, where a large metal-pole billboard was uprooted and cladding of a new warehouse was pulled off. Other damage, not surveyed, in Mission included a partial roof and wall collapse at a self-service car wash.

Damage peaked across the City of McAllen, where some of the highest ground-level wind speeds (85 mph) were estimated. The most notable damage was found at McAllen's Miller International Airport, where a tied-down Cessna was flipped, a Gulfstream jet was turned, and a smaller aircraft was totaled. A fairly new TPO flat roof system was lifted from a low-rise hotel about a half mile east of the airport. The wind may have been higher at the elevation of the roof. Other notable surveyed damage included a flipped very large station canopy at 23rd and Lark, which had considerable rust on several connecting poles. Poorly anchored roofs were lifted off a number of buildings along and near Business 83, including to a local older motel. Asphalt and barrel-tile shingles were lifted off several higher roofs at two or three story buildings across the survey track. Two 2x4 beams were blown from a rusting scaffold into the fiberglass of the cab of a city public works truck in north McAllen. Dozens of fallen wooden power poles were seen by the survey team, along with hundreds of fallen mesquite and live oak limbs and dozens of snapped or uprooted live oak, ash, and palm trees. Dozens of street signs supported by lightweight metal poles were bent to the ground, dozens of traffic light arms at about 15 to 20 feet above ground were turned, and dozens of vinyl/paper/plastic billboard signs, 30 to 50 feet above ground, were blown out of their casings.

Damage continued into the City of Pharr, where several ribs were noted in the retaining fence at a commercial golf range. Other damage in Pharr and the south portions of the Cities of San Juan and Alamo was not surveyed. The team surveyed neighborhoods north of Military Highway (U.S. 281) from south Donna east to Progreso. Additional tree and fence damage was common, but notable was a four-foot poorly anchored masonry wall was blown down in south Weslaco, and several well-built homes with shingle damage between south Weslaco and the Rio Grande.

Damage was highest to structures and roof coverings...largely

substandard or not to appropriate specifications...exposed fully to the downburst winds that came from the west-northwest. Nearly all of the damage from Pharr to Progreso was estimated to be from 75 to 80 mph winds.

Thunderstorm Wind 2: Progreso (Hidalgo County Texas) to Los Indios (Cameron County Texas)...

Peak Wind /E/: 70 to 80 mph  
Path Length /statute/: 16.2 miles  
Path Width /maximum/: 1.52 miles  
Fatalities: 0  
Injuries: 0

Start Date: Apr 29 2023  
Start Time: 1253 AM CDT  
Start Location: Progreso / Hidalgo TX  
Start Lat/Lon: 26.0900 / -97.9500

End Date: Apr 29 2023  
End Time: 110 AM CDT  
End Location: 1.8 E Los Indios / Cameron TX  
End Lat/Lon: 26.0440 / -97.6990

NWS Brownsville/Rio Grande Valley survey team #2's damage track began in Progreso and continued along and near Military Highway (U.S. 281) to just east of Los Indios in southwest Cameron County. Peak winds were 70 to 75 mph from near Progreso toward the Cameron/Hidalgo County line, but increased again to 75 to 80 mph from the County line into Santa Maria and Los Indios. Damage included a few more partial tin/light metal roofs lifted to a home and a warehouse, at least a dozen snapped trees and many more large limbs, and one flipped tractor trailer.

Survey team #2 also investigated scattered damage from Weslaco to Harlingen, along IH-2. The damage included a automobile showroom window blown out in Harlingen, and more vinyl/plastic business signs blown out from their casings and additional tree and power line/power pole damage. Wind estimates in these areas was 65 to 70 mph, a little bit above values recorded at NWS Automated Surface Observation Stations and Automated Weather Observing Stations at airports along and near this part of the survey.

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NOTE:

The information in this statement is preliminary and subject to change pending final review of the events and publication in NWS Storm Data.

For specific surveyed locations on a map, as well as dozens of photos and site-specific wind ratings, can be found at <https://apps.dat.noaa.gov/StormDamage/DamageViewer/>. When on this page, change the dates in the upper right corner to "begin date" of 4/28/2023 and "end date" of 4/29/2023.

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Preliminary Storm Reports across the Rio Grande Valley from April 28-29<sup>th</sup>, 2023. These include initial reports from the survey above, as well as other reports from Starr and Zapata County, as well as Laguna Madre and the Lower Texas Gulf waters. Please note that this is only a subset of all of the damage that occurred across the populated Rio Grande Valley. We hope to create a larger "story map" for this episode later this spring.

Tstm Wnd Dmg = Thunderstorm Wind Damage (information)

Tstm Wnd Gst = Thunderstorm Wind Gust (observation)

ASOS = Automated Surface Observing System (NWS)

AWOS = Automated Weather Observing System (FAA-Administered)

PRELIMINARY LOCAL STORM [REPORT](#)...SUMMARY  
NATIONAL WEATHER SERVICE BROWNSVILLE TX  
1143 AM CDT MON MAY 1 2023

..TIME...	...EVENT...	...CITY LOCATION...	... <a href="#">LAT</a> .LON...
..DATE...	....MAG....	..COUNTY LOCATION..ST..	...SOURCE....
	..REMARKS..		
1005 PM	<a href="#">HAIL</a>	MORALES - SANCHEZ COLON	26.78N 99.12W
04/28/2023	E1.75 INCH	ZAPATA TX	LAW ENFORCEMENT
ZAPATA COUNTY SHERIFFS OFFICE REPORTED CAR SWERVED OFF ROAD IN MORALES-SANCHEZ DUE TO <a href="#">HAIL</a> THE SIZE OF GOLF BALLS.			
1008 PM	<a href="#">HAIL</a>	SIESTA SHORES	26.86N 99.25W
04/28/2023	E0.75 INCH	ZAPATA TX	LAW ENFORCEMENT
ZAPATA COUNTY SHERIFFS OFFICE REPORTED <a href="#">HAIL</a> THE SIZE OF PENNIES IN SIESTA SHORES AREA.			
1054 PM	<a href="#">HAIL</a>	FALCON HEIGHTS	26.56N 99.12W
04/28/2023	E1.00 INCH	STARR TX	PUBLIC
EMPLOYEE AT FALCON HEIGHTS MOTEL AND RV PARK REPORTED <a href="#">HAIL</a> THE SIZE OF QUARTERS.			
1131 PM	<a href="#">HAIL</a>	ROMA	26.41N 99.00W
04/28/2023	E1.00 INCH	STARR TX	PUBLIC
MCDONALDS IN ROMA AT 104 EAST GRANT STREET REPORTED <a href="#">HAIL</a> THE SIZE OF QUARTERS.			
1133 PM	<a href="#">HAIL</a>	5 WNW RIO GRANDE CITY	26.41N 98.90W
04/28/2023	E0.75 INCH	STARR TX	PUBLIC
MEMBER OF THE PUBLIC SHARED VIDEO OF DIME TO PENNY-SIZED <a href="#">HAIL</a> FALLING ALONG N ALVAREZ ROAD. TIMING BASED ON THE TIME OF THE <a href="#">REPORT</a> AND <a href="#">RADAR</a> .			
1133 PM	<a href="#">HAIL</a>	4 WNW RIO GRANDE CITY	26.39N 98.89W
04/28/2023	E1.50 INCH	STARR TX	PUBLIC
MEMBER OF THE PUBLIC SHARED PICTURES OF HALF			

DOLLAR TO PING PONG-SIZE [HAIL](#) ALONG SUNTEX ROAD WEST OF RIO GRANDE CITY. [HAIL](#) SIZES ARE ESTIMATED BASED OFF PICTURES. TIME ESTIMATED BASED ON [RADAR](#).

0448 AM MARINE [TSTM](#) WIND 1 SSE PORT ISABEL 26.06N 97.22W  
04/29/2023 M47 MPH CAMERON TX BUOY

BUOY STATION PTIT2 PORT ISABEL, TX.

0448 AM MARINE [TSTM](#) WIND 1 SSE PORT ISABEL 26.06N 97.22W  
04/29/2023 M47 MPH CAMERON TX BUOY

BUOY STATION PTIT2 PORT ISABEL, TX.

1120 PM MARINE [TSTM](#) WIND 54 ENE PORT MANSFIELD 26.97N 96.69W  
04/28/2023 M49 MPH GMZ175 TX [MESONET](#)

[MESONET](#) STATION 42020 54 ENE PORT MANSFIELD.

0100 AM MARINE [TSTM](#) WIND 19 N PORT MANSFIELD 26.82N 97.49W  
04/29/2023 M49 MPH GMZ135 TX BUOY

BUOY STATION RSJT2 RINCON DEL SAN JOSE, TX.

0142 AM MARINE [TSTM](#) WIND 2 S SOUTH PADRE ISLAND 26.05N 97.16W  
04/29/2023 M48 MPH GMZ130 TX [MESONET](#)

SPI BRAZOS SANTIAGO TCOON STATION/BUOY  
BZST2.

0142 AM MARINE [TSTM](#) WIND 1 W SOUTH PADRE ISLAND 26.08N 97.18W  
04/29/2023 M56 MPH GMZ130 TX BUOY

BUOY STATION PCGT2 SOUTH PADRE ISLAND [C](#).G.  
STATION, TX.

1134 PM [TSTM](#) [WND](#) DMG 4 W RIO GRANDE CITY 26.38N 98.89W  
04/28/2023 STARR TX PUBLIC

VIDEO ON SOCIAL MEDIA SHOWS A TREE DOWN NEAR  
THE INTERSECTION OF SUNTEX ROAD AND HWY 83.  
TIMING ESTIMATED BY [RADAR](#).

1145 PM [TSTM](#) [WND](#) DMG 5 E GARCIAVILLE 26.34N 98.63W  
04/28/2023 STARR TX PUBLIC

MEMBER OF THE PUBLIC SHARED A PICTURE THAT  
SHOWED A LARGE TREE [LIMB](#) FROM A MESQUITE  
TREE ACROSS FM2360 NEAR LA VICTORIA IN STARR  
COUNTY. TIME IS ESTIMATED BASED ON [RADAR](#).

1155 PM [TSTM](#) [WND](#) DMG 2 N SULLIVAN CITY 26.30N 98.56W  
04/28/2023 HIDALGO TX PUBLIC

VIDEO SHARED BY A MEMBER OF THE PUBLIC SHOWS  
SEVERAL LARGE TREES DOWN ALONG EL PINTO ROAD

NEAR ROSENDO BENAVIDES ELEMENTARY. TIME  
ESTIMATED BY [RADAR](#).

1159 PM [TSTM](#) [WND](#) DMG 1 SSW LA JOYA 26.24N 98.49W  
04/28/2023 HIDALGO TX PUBLIC

MEMBER OF THE PUBLIC SHOWS SEVERAL MESQUITE  
TREES DOWN ALONG GARZA AVENUE NORTH OF  
MILITARY ROAD. TIME ESTIMATED BY [RADAR](#).

1202 AM [TSTM](#) [WND](#) DMG 3 NE LA JOYA 26.28N 98.44W  
04/29/2023 HIDALGO TX PUBLIC

VIDEO FROM THE PUBLIC SHOWS THE METAL ROOF  
OF A CARPORT PEELED BACK NEAR THE  
INTERSECTION OF MILE 3 ROAD AND TOM GILL  
ROAD. TIME APPROXIMATED BY [RADAR](#).

1220 AM [TSTM](#) [WND](#) DMG 3 NNE MCALLEN 26.26N 98.21W  
04/29/2023 HIDALGO TX PUBLIC

MEMBER OF THE PUBLIC SHARED PICTURES OF  
DAMAGE TO 2 TO 5 LARGE OAK TREES, INCLUDING  
A LARGE BRANCH ABOUT 8 TO 12 INCHES IN  
DIAMETER THAT HAD SNAPPED. TIMING ESTIMATED  
BY [RADAR](#).

1220 AM [TSTM](#) [WND](#) DMG 3 N MCALLEN 26.26N 98.24W  
04/29/2023 HIDALGO TX PUBLIC

THE CANOPY OVER THE GAS PUMPS AT THE EXXON  
GAS STATION AT THE CORNER OF LARK AND N 23RD  
STREET WAS BLOWN OVER. OTHER IMAGES SHOW  
METAL PIECES IN THE ROADWAY NEAR THERE.  
TIMING BASED ON [RADAR](#).

1222 AM [TSTM](#) [WND](#) DMG 3 ENE MISSION 26.23N 98.28W  
04/29/2023 HIDALGO TX PUBLIC

MEMBER OF THE PUBLIC CALLED IN TO [REPORT](#)  
SEVERAL TREES THAT WERE UPROOTED ALONG WITH  
SEVERAL OTHERS THAT LOST TREE LIMBS. TIMING  
BASED ON THEIR [REPORT](#) AND [RADAR](#).

1222 AM [TSTM](#) [WND](#) DMG MISSION 26.21N 98.32W  
04/29/2023 HIDALGO TX FIRE DEPT/RESCUE

WESLACO FIRE MARSHALL REPORTS DAMAGE TO FOUR  
TO FIVE TREES IN HIS NEIGHBORHOOD IN  
MISSION.

1228 AM [TSTM](#) [WND](#) DMG 1 NW PHARR 26.20N 98.20W  
04/29/2023 HIDALGO TX BROADCAST MEDIA

BROADCAST MEDIA SHARED VIDEO SHOWING SEVERAL  
SECTIONS OF NETTING RIPPED AT THE TOPGOLF IN  
PHARR. TIMING ESTIMATED BY [RADAR](#).

1230 AM [TSTM](#) [WND](#) DMG 1 NNE PHARR 26.20N 98.18W  
04/29/2023 HIDALGO TX PUBLIC

MEMBER OF THE PUBLIC SHARED AN IMAGE OF THE ROOF BLOWN OFF THE CAR CHECK AUTO SERVICE AND ULTIMATE DENTAL CARE BUILDING AT THE CORNER OF N CAGE BLVD AND W CLARK AVE. THE ULTIMATE DENTAL CARE PORTION OF THE BUILDING SUSTAINED HEAVY DAMAGE WITH PORTIONS OF THE ROOF ON THE CAR CHECK AUTO SERVICE SIDE OF THE BUILDING HANGING OVER THE GARAGES. TIME ESTIMATED BASED ON [RADAR](#).

1243 AM [TSTM](#) [WND](#) DMG 1 W WESLACO 26.16N 98.00W  
04/29/2023 HIDALGO TX FIRE DEPT/RESCUE

THE FIRE CHIEF FOR WESLACO CALLED AND REPORTED SEVERAL BUSINESS SIGNS EITHER DAMAGED OR BLOWN DOWN ALONG BUSINESS 83. THE LARGEST SIGN BLOWN DOWN WAS THE 8 FOOT LONG JOHN SILVERS SIGN WITH DAMAGE TO THE KFC SIGN A LITTLE WAYS DOWN THE ROAD. TIMING ESTIMATED BY [RADAR](#).

0110 AM [TSTM](#) [WND](#) DMG PHARR 26.18N 98.19W  
04/29/2023 HIDALGO TX PUBLIC

CITIZEN REPORTED SEVERAL TREES, TRAFFIC SIGNS DOWN AND STOP SIGNS PULLED OUT OF THE GROUND ALONG HIGHWAY 495 AND SUGAR RD.

0125 AM [TSTM](#) [WND](#) DMG 2 W BROWNSVILLE 25.93N 97.51W  
04/29/2023 CAMERON TX PUBLIC

MEMBER OF THE PUBLIC SHARED TWO LARGE TREES EITHER UPROOTED OR SNAPPED NEAR THE BASE OF THE TREE NEAR THE INTERSECTION OF DEL MAR AND RUSSELL AVENUE.

0130 AM [TSTM](#) [WND](#) DMG 2 N BROWNSVILLE 25.95N 97.48W  
04/29/2023 CAMERON TX PUBLIC

MEMBER OF THE PUBLIC SHARED A PICTURE OF SEVERAL TREES DOWN AT THE CORNER OF RUBEN TORRES AND HUDSON BLVD, OR NEAR THE WALMART. TIME ESTIMATED BY [RADAR](#).

0141 AM [TSTM](#) [WND](#) DMG 3 ESE BROWNSVILLE 25.91N 97.43W  
04/29/2023 CAMERON TX PUBLIC

AN OFFICIAL WITH THE BROWNSVILLE-SOUTH PADRE ISLAND INTERNATIONAL AIRPORT REPORTED SOME MINOR DAMAGE TO A FEW HANGERS, INCLUDING A PORTION OF THE ROOF OF A HANGER CAVED IN SLIGHTLY, ALLOWING WATER TO ENTER THE HANGER. THE GARAGE DOOR ON ANOTHER HANGER ON

THE WEST SIDE OF THE AIRPORT CAVED IN. THEY ALSO REPORTED SOME [MINOR FLOODING](#) OF THE TERMINAL DURING THE [HEIGHT](#) OF THE HEAVY RAIN LAST NIGHT. TIMING BASED ON WHEN THE STRONGEST WINDS AT THE KBRO [ASOS](#) OCCURRED.

0946 PM [TSTM](#) [WND](#) [GST](#) HEBBRONVILLE 27.32N 98.69W  
04/28/2023 M62 MPH JIM HOGG TX [MESONET](#)

HEBBRONVILLE RAWS SITE (HVL2) .

1230 AM [TSTM](#) [WND](#) [GST](#) 2 S MCALLEN 26.19N 98.24W  
04/29/2023 M74 MPH HIDALGO TX [ASOS](#)

[ASOS](#) LOST [POWER](#) SHORTLY AFTER PEAK WINDS WERE OBSERVED.

1255 AM [TSTM](#) [WND](#) [GST](#) WESLACO 26.16N 97.98W  
04/29/2023 M58 MPH HIDALGO TX [ASOS](#)

0114 AM [TSTM](#) [WND](#) [GST](#) HARLINGEN 26.20N 97.69W  
04/29/2023 M61 MPH CAMERON TX [ASOS](#)

VALLEY INTERNATIONAL AIRPORT HARLINGEN [ASOS](#) .

0138 AM [TSTM](#) [WND](#) [GST](#) 3 WNW HOLLY BEACH 26.15N 97.34W  
04/29/2023 M62 MPH CAMERON TX [ASOS](#)

CAMERON COUNTY AIRPORT [ASOS](#) .

0141 AM [TSTM](#) [WND](#) [GST](#) BROWNSVILLE 25.93N 97.48W  
04/29/2023 M61 MPH CAMERON TX [ASOS](#)

BROWNSVILLE/SPI INTERNATIONAL AIRPORT [ASOS](#) .

0946 PM [TSTM](#) [WND](#) [GST](#) 4 NW HEBBRONVILLE 27.35N 98.74W  
04/28/2023 M62 MPH JIM HOGG TX [MESONET](#)

[MESONET](#) STATION HVL2 HEBBRONVILLE.

1234 AM [TSTM](#) [WND](#) [GST](#) 2 SSW MCALLEN 26.18N 98.25W  
04/29/2023 M74 MPH HIDALGO TX [ASOS](#)

[ASOS](#) STATION KMFE MCALLEN.

1255 AM [TSTM](#) [WND](#) [GST](#) 2 NE WESLACO 26.18N 97.97W  
04/29/2023 M58 MPH HIDALGO TX [AWOS](#)

[AWOS](#) STATION KTXW WESLACO MIDVALLY.

0114 AM [TSTM](#) [WND](#) [GST](#) 3 NE HARLINGEN 26.23N 97.65W  
04/29/2023 M61 MPH CAMERON TX [ASOS](#)

[ASOS](#) STATION KHRL HARLINGEN.

0129 AM [TSTM](#) [WND](#) [GST](#) 5 NE BAYVIEW 26.17N 97.33W



04/29/2023 M62 MPH CAMERON TX [ASOS](#)

[ASOS](#) STATION KPIL PORT ISABEL.

0130 AM [TSTM](#) [WND](#) [GST](#) 11 N LAGUNA VISTA 26.26N 97.28W

04/29/2023 M60 MPH CAMERON TX [MESONET](#)

[MESONET](#) STATION RLIT2 11 N LAGUNA VISTA.

0141 AM [TSTM](#) [WND](#) [GST](#) 4 E BROWNSVILLE 25.92N 97.42W

04/29/2023 M61 MPH CAMERON TX [ASOS](#)

[ASOS](#) STATION KBRO BROWNSVILLE.

0135 AM [TSTM](#) [WND](#) [GST](#) 6 NNW SOUTH PADRE ISLAN 26.16N 97.18W

04/29/2023 M59 MPH GMZ130 TX [MESONET](#)

[MESONET](#) STATION XSPP SPIW PARK.